

# Project and Facility Description

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## 2.1 Introduction

The Modesto Irrigation District (MID) proposes to build a nominal 95-megawatt (MW) net output simple-cycle power plant in an industrial area near the MID Stockton Substation located in the City of Ripon (City) in San Joaquin County (County), California. This proposed facility is referred to as the MID Electric Generation Station (MEGS) Project (Project). MID will develop, build, own, and operate the facility.

## 2.2 Site Layout

The new plant will be in an industrial area in the City of Ripon, adjacent to the City's wastewater treatment plant and approximately 0.25 mile from the existing MID Stockton substation. The plant will be within a fenced area at the intersection of South Stockton Avenue and Doak Boulevard. The MEGS facility will occupy a total of approximately 8 acres within a 12.25-acre parcel for which MID has obtained a purchase option. Of the 8 acres, the plant would occupy approximately 6 acres near the northern side of the site (see Figure 2-1). An additional 2 acres would be needed for primary and emergency access to the plant and transmission lines. The remaining 4.25 acres would be used for equipment laydown and parking during construction. After construction, the 4.25 acres would be available for sale, equipment storage, or future development as determined by the MID Board of Directors.

A plot plan showing the proposed location and orientation of major plant facilities, including the LM6000s, selective catalytic reduction (SCR) ducting and stack, chillers/cooling tower, water treatment system, water storage tanks, buildings, switchgear, and transformers are shown in Figure 2-2. Two figures showing the elevation view are presented as Figure 2-3a and 2-3b.

A 10-foot-high chain-link security fence with vinyl slating will be installed around the plant perimeter. The plant will have paved roads and parking areas. MID will also pave the main plant power block area. The remaining plant areas will be covered with crushed rock. Stormwater will naturally percolate within the graveled plant areas, with excess water collected and sent to the City's stormwater system. The undeveloped areas used for construction laydown and construction parking will be left undeveloped; however, these areas will be surfaced with crushed rock.

## 2.3 Process Description and System Performance

The plant will consist of two General Electric LM6000 SPRINT Combustion Turbine Generators (CTGs) equipped with water injection to control oxide of nitrogen (NO<sub>x</sub>) emissions, power augmentation, and associated support equipment.

Each CTG will generate a nominal 50 MW. Plant parasitic power will be approximately 5 MW. Therefore, the plant net electrical output will be approximately 95 MW. The project is expected to have an overall annual availability approaching 100 percent.

Plant equipment will include CTG inlet air water chillers with associated packaged cooling towers, water treatment systems, wastewater treatment systems, gas compression equipment, and emission control systems necessary to meet the proposed air emission limits. Stack NO<sub>x</sub> emissions will be controlled to 2.5 parts per million by volume, dry (ppmvd) basis, corrected to 15 percent oxygen (@ 15 percent O<sub>2</sub>) by a combination of water injection in the CTGs and SCR systems in the exhaust ductwork. Carbon monoxide (CO) will be controlled to 6 ppmvd @ 15 percent O<sub>2</sub> using an oxidation catalyst system. Ammonia slip will be limited to 10 ppmvd.

Table 2-1 provides the function, capacity, and general features of major equipment items selected for the proposed facility. Major components of the generating system include a combustion turbine, emission control systems, exhaust stack, water and wastewater treatment systems, fuel delivery systems, and electrical transmission and interconnection systems.

**TABLE 2-1**  
Function, Capacity, and General Features of the Plant's Major Equipment

Equipment	Quantity	Nominal Capacity	Description
Combustion Turbine Generator	2	~50,000 kW gross	GE LM-6000 SPRINT
SCR System	2	2.5 ppmvd NO <sub>x</sub>	SCR System with ducting and stack
Aqueous Ammonia Storage Tank	1	10,000 gallons	29 percent aqueous ammonia
Chiller/Cooling Tower	2	1,800 tons each	Integral chiller and cooling tower system
Demineralized Water Treatment System	2	100 gallons per minute	RO & EDI system for demineralized water
Wastewater Treatment System	1	80 gallons per minute	Lime softening system
Natural gas compressors	3	12 MSCFD, 700 psig, 1,000 hp	50 percent capacity each recip compressors
Oil/water separator	1	500 gallons	Underground, double wall, CPI Type, 10 ppm oil
Demineralized Water Tank	1	150,000 gallons	Bolted steel tank, 24 hrs storage
Raw Water Storage Tank	1	375,000 gallons	Bolted steel tank, 24 hrs storage
Continuous Emissions Monitoring (CEM) System	2		O <sub>2</sub> , NO <sub>x</sub> , CO
Main Transformers	2	13.8-kV/69-kV, 65 MVA	

The maximum plant fuel consumption is approximately 942 million British thermal units per hour (MMBtu/hr), at higher heating value (HHV). The plant will not have black-start capability. The following Table 2-2 outlines the expected performance for the MEGS facility.

**TABLE 2-2**  
Expected Performance for the MEGS Facility

<b>Expected Performance</b>	<b>Units</b>	<b>Value</b>
Gross Power Output	KW	100,260
Net Power Output	KW	95,044
Fuel Consumption	MMBtu/hr HHV	942
Net Heat Rate	Btu/kWh HHV	9,911
Annual Operating Hours	hr/yr	up to 8,760

Based on preliminary engineering for the MEGS, the on-site Project facilities will include:

- Two simple-cycle combustion turbine generator sets with ducting for SCR systems and 85-foot-tall stacks
- Selective catalytic reduction systems for oxides of nitrogen (NO<sub>x</sub>) control
- An oxidation catalyst for carbon monoxide (CO) control
- SCR system diluent air fans
- Continuous emission monitoring and data acquisition systems
- Chillers, pumps, cooling towers, and auxiliary equipment
- Generator step-up transformers
- Auxiliary transformers
- Station service transformers
- Equipment enclosures
- A fire protection system
- A 10-foot-tall masonry sound wall enclosing the fuel gas compressors
- Aqueous ammonia storage tank
- Water treatment system
- Wastewater treatment system
- Storage tanks for raw water and demineralized water
- Natural gas compressors
- Administrative offices and maintenance/water treatment facilities
- Electrical and controls building with control room
- Parking
- Plant wastewater sumps

- Outdoor lighting

Off-site improvements required to support the project include:

- Approximately 0.25 mile of 69-kV subtransmission line in a northeasterly direction to the existing MID Stockton Substation. The subtransmission line will also include a fiber optic line.
- Approximately 0.25 mile of new gas line along Stockton Avenue to the local PG&E Main at 4th Street.
- Addition of breakers and auxiliaries to the existing MID Stockton Substation.

### **2.3.1 Electrical Generation Equipment**

Two GE LM6000 SPRINT combustion turbines, each with a nominal heat input of 471 MMBtu/hr (HHV) will drive an electric power generator with a name plate rating of 71,000 kVA. The gross power output from the turbine / generator will be approximately 50,130 kW (based on gas turbine limitations). Inlet air for the gas turbine will be directed through a multistage filtration system that will include silencing and ducting elements. A packaged chilled water system will be used for CTG inlet air conditioning to maximize CTG performance during periods of high ambient temperatures. The chiller system will allow the CTG to operate at relatively constant power output with varying ambient air conditions. The packaged chilled water system for each turbine will include up to a 1,800-ton electric chiller, dual-chilled water pumps, dual condenser water pumps, two packaged cooling towers, motor control center (MCC), and chiller controls. The chiller refrigerant will be either R123 or R134A, which are considered to be CFC-free refrigerants. The chilled water loop will use 25 percent propylene glycol/75 percent water solution for freeze protection.

### **2.3.2 Emission Reduction System**

The proposed electrical generation plant has been designed to meet the requirements of MID's electrical system while employing best available control technology (BACT) for emissions control. The combustion turbine will be able to operate on demand and meet a wide range of electrical system operating scenarios, while complying with applicable California air quality requirements and environmental regulations.

The emission reduction system for each turbine consists of the following major components:

- Water injection system for the combustion turbine
- NO<sub>x</sub> SCR system
- Ammonia injection system
- Oxidation catalyst
- Continuous emission monitoring system

The combustion turbines will use water injection technology to minimize NO<sub>x</sub> emissions from the CTG exhaust. Selective catalytic reduction will be used to further reduce the final stack NO<sub>x</sub> emissions to 2.5 ppmvd at full load. The SCR system will use a catalyst and aqueous ammonia as a reagent.

The SCR system will consist of a catalyst bed, an ammonia injection grid located within the exhaust ductwork, an air dilution system and an aqueous ammonia storage and delivery system. Ammonia injected into the hot exhaust gas stream will react with the NO<sub>x</sub> emissions producing nitrogen, water, and trace amounts of unreacted ammonia. Periodic replacement of catalyst bed modules will be implemented to ensure optimum NO<sub>x</sub> reduction for the life of the plant.

The ammonia injection system will be a skid-mounted unit consisting of ammonia/air mixing equipment, an electric vaporization system, local monitoring instrumentation, and control valves. The ammonia storage system will use a 10,000-gallon aboveground ammonia storage tank.

The oxidation catalyst is a precious metal type located upstream of the SCR system, and is designed to achieve a CO emission limit of 6 ppmvd @ 15 percent O<sub>2</sub> under all operating conditions (excluding startups and shutdowns).

The exhaust stacks will be equipped with continuous emission monitoring system (CEMS). The CEMS will be certified by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD). The CEMS will calculate and record the stack exhaust flow rate as well as the emissions of NO<sub>x</sub>, CO, and oxygen. Mass emission rates of other pollutants will be calculated based on SJVUAPCD-approved algorithms. Additional stack sampling ports will be provided for compliance testing.

## 2.4 Fuel System

Natural gas is the only fuel used to fire the combustion turbines. Natural gas will be delivered by PG&E at a pressure between 200 and 400 psig. A connection will be made to the existing PG&E gas main 0.25 mile north of the plant site on South Stockton Avenue at 4th Street.

Three 1,000-hp gas compressors at MEGS will be used to boost the natural gas pressure to 700 psig, suitable for the CTGs. Each compressor will be capable of supplying the fuel gas consumed by a single combustion turbine. The third compressor will serve as backup should one compressor be out of service. This arrangement will allow the plant to operate more efficiently in a turndown mode should only one compressor be required to supply the turbines because of high compressor suction pressure.

## 2.5 Water Supply System

The proposed project will use raw water from the City of Ripon's non-potable water system for process water needs. The City of Ripon's non-potable water system uses municipal water wells that no longer meet drinking water standards.

In April 2003, the City of Ripon began construction on a City improvement project for the extension of South Stockton Avenue and Doak Boulevard near the MEGS site. As part of the project, the City will install potable and non-potable water lines, sanitary sewer lines, an industrial wastewater line, and a stormwater system in these streets. Also as part of the improvement project, the City intends to pave the extensions of South Stockton Avenue and Doak Boulevard and add curbs, gutters, sidewalks, street lighting, and a bikeway. The

purpose of the project is to provide City water supply and water disposal services to the vacant industrial parcels in the area as part of improving the roads. These parcels were subdivided in March 2003, and the City expects other industrial developments to be located on the industrially zoned vacant land to the west of the MEGS site.

The length of the various MEGS pipelines would be different, but the pipelines would not extend more than 30 feet from the project site to the respective pipeline in South Stockton Avenue or Doak Boulevard. Each of the pipelines will connect to short tap lines the City is constructing off of its main pipelines. These tap lines are being installed by the City for all of the vacant industrial parcels in the area, as part of the City's typical service connections (Machado, 2003). Installation of these tap lines prior to the paving of the South Stockton Avenue and Doak Boulevard extensions will avoid cutting through newly paved roads as each developer connects to the City's utility system.

For the MEGS project, MID will construct potable and non-potable water supply lines and wastewater and stormwater discharge pipelines to interconnect to the City utility services taps located on all parcels adjacent to South Stockton Avenue and Doak Boulevard. Specifically, MID will construct a 3-inch potable water pipeline, a 6-inch non-potable water pipeline, a 6-inch industrial wastewater pipeline, an 8-inch sanitary sewer line, two 10-inch firewater pipelines, and two 12-inch stormwater discharge pipelines.

### **2.5.1 Water Requirements and Treatment Systems**

Water demand for all systems in the MEGS plant are summarized in Table 2-3. The approximate maximum daily non-potable water demand is 244 gallons per minute (gpm).

1. Chiller cooling tower makeup will come from untreated non-potable water. Maximum summer peak cooling tower makeup rate with non-potable City water is estimated to be 85 gpm (with maximum CTG inlet air chilling). The cooling tower equipment will only be in operation when the ambient outdoor air temperature is above approximately 55°F. Therefore, for a significant amount of hours in the year (typically during the winter months), there will be no blowdown from the cooling towers. Cooling tower blowdown will be processed in the wastewater lime softening pre-treatment system.
2. Deionized/demineralized (DI) water will be used for CTG NO<sub>x</sub> water injection and for SPRINT inter-cooling injection water. The maximum expected DI water makeup rate to the plant is estimated at 101 gpm. A DI water treatment system is planned based on Reverse Osmosis (RO) and Electro Deionization (EDI) technologies. The wastewater from this system will be from inlet filtration and RO reject and will merely be water with a concentration of the original minerals contained in the non-potable water supply. This wastewater will be sent to the Ripon sanitary sewer line in South Stockton Avenue. RO membrane reject wastewater will also be processed in the wastewater lime softening system.
3. Cooling tower blowdown and RO reject wastewater will be processed through a lime softening system to reduce the concentrated total dissolved solids (TDS) levels to concentration levels acceptable for discharge to the City of Ripon treatment system in the sanitary sewer line in South Stockton Avenue.
4. Anticipated chemicals used in the cooling tower are sodium bromide, acid for pH control, a corrosion inhibitor, and a scale inhibitor.

During maximum operation, the plant is expected to use approximately 244 gpm of non-potable water, as shown in the water balance diagram (Figure 2-4 and Table 2-3).

**TABLE 2-3**  
Plant Water Balance

Process Point	From	To	GPM (Max)	GPM (Avg)
1	Ripon Non-Potable Water Supply	Plant Services	244	122
2	Ripon Non-Potable Water Supply	Chiller/Cooling Tower Makeup	85	43
3	Ripon Non-Potable Water Supply	Demineralized Water Filter	159	79
4	Demineralized Water Plant	RO Inlet	158	79
5	Demineralized Water Filter	Plant Wastewater Sump	1 (avg flow)	0.4
6	RO Outlet	E-Cell Inlet	101	50
7	RO Skid	Plant Wastewater Sump	57	28
8	DI Water	CTG Combined NO <sub>x</sub> & SPRINT Inj	101	50
9	DI Water	CTG Water Injection	84	42
10	DI Water	CTG SPRINT Injection	17	8
11	DI Water	Evaporated to Atmosphere	101	50
12	Cooling Tower	Evaporation	64	32
13	Cooling Tower Blowdown	Plant Wastewater Sump	21	11
14	Total Wastewater	Plant Wastewater Sump	79	39

## 2.5.2 Cooling Water Systems (Closed Cooling Water and Chilled Water)

Each chiller unit will have dedicated packaged cooling towers to provide heat removal from the chiller. The cooling towers will also be used to remove the minor amount of heat rejection needed for the combustion turbine generator lube oil coolers. The cooling towers will use chemical treatment for corrosion, scale, and biological control.

## 2.6 Wastewater Systems

### 2.6.1 Process Wastewater

There are two process wastewater systems within the plant:

- Oily-water waste from the equipment areas will be processed in a CPI-type oil/water separator with the treated water discharged to the City of Ripon's sanitary wastewater system. The oil/water separator will have secondary containment.
- Cooling tower blowdown as well as reverse osmosis reject water will be processed in the wastewater lime softening system and then go directly to the plant wastewater sump. The sump will discharge to the City of Ripon's sanitary wastewater system.

To properly manage and prevent the uncontrolled release of contaminated liquid waste, the wastewater systems will be designed with potential accidental chemical or oil spill leakage areas physically separated and isolated to prevent contamination of the stormwater system. Curbs or concrete pits will be provided.

### **2.6.2 Stormwater Drain System**

The stormwater drain system for MEGS will be designed to collect and carry stormwater to the existing City of Ripon's stormwater drain system located in South Stockton Avenue. The site will be graded to direct runoff via overland flow to catch basins. Reinforced concrete pipe will carry the stormwater via gravity flow to a direct connection to the City's stormwater system.

## **2.7 Management and Disposal of Hazardous Materials and Hazardous Wastes**

The hazardous materials presented in Table 2-4 will be stored on the project site. Twenty-nine percent aqueous ammonia will be used to control NO<sub>x</sub> emissions as part of the plant SCR system. Small amounts of sulfuric acid and sodium bromide will be used to control pH and biological growth in the cooling tower circulating water system. Dry lime will be used in the wastewater softening system. While there may be small amounts of other hazardous materials used in the operation and/or maintenance of the plant, the amounts are expected to be below the minimum thresholds for reporting in the Hazardous Materials Business Plan (HMBP).

### **2.7.1 Aqueous Ammonia**

The plant will use 29 percent aqueous ammonia, which will be stored in a 10,000-gallon capacity tank located on the MEGS site. The tank will provide storage for over 2 weeks at full load on both units.

### **2.7.2 Other Hazardous Materials**

Chemicals used for water treatment in the cooling tower will include sulfuric acid, sodium bromide, and a corrosion/scale inhibitor. These chemicals will be stored in separate portable tanks. Each tank will be placed inside a separate area providing secondary containment. All chemicals will be physically separated from the plant drain system.

The combustion turbine generator equipment will include on-skid storage of lubricating oils and water wash detergent.

Emergency showers and eyewash stations with a continuous tempered potable water supply will be located immediately adjacent to the chemical storage facilities.

Several methods will be used to properly manage and dispose of the hazardous or other wastes generated by the proposed project. Spent lubricating oil filters and cartridge filters will be disposed of in a Class I landfill. Spent SCR and oxidation catalysts will normally be

**TABLE 2-4**  
Hazardous Materials and Quantities

<b>Material</b>	<b>Use</b>	<b>Quantity (gallons)</b>
Anti-scalant	Reverse osmosis equipment scale protection	200
Aqueous Ammonia (29 percent solution)	Control NO <sub>x</sub> emissions through selective catalytic reduction	10,000
Cleaning Chemicals/Detergents	Periodic cleaning	10
Laboratory Reagents (liquid)	Water/wastewater laboratory analysis	10
Laboratory Reagents (solid)	Laboratory analysis	50 lb
Synthetic Lubrication Oil	Lubricate rotating equipment (e.g., combustion turbine bearings)	280
Mineral Lubrication Oil	Lubricate rotating equipment (e.g., generator bearings)	782
Mineral Insulating Oil	Transformers	10,600
Scale/Corrosion Inhibitor (NALCO 23288)	Cooling tower scale/corrosion inhibitor	200
Sodium Bromide (NALCO STABREX ST40)	Cooling tower biocide	200
Sodium Hydroxide	Reverse osmosis equipment scale protection	200
Sulfuric Acid	Cooling tower water pH control, lime softening system effluent pH control	400
Lime (dry stored)	Wastewater softening system	35,000 pounds
Settling acid (polymer)	Wastewater softening system	100

recycled by the supplier. In the unlikely event that the supplier is unable to recycle the catalyst, it would be disposed of in a Class I landfill. Spent lubricating oil will be recovered and recycled by a waste-oil-recycling contractor. Wastewater treatment system dewatered sludge will be disposed of in an approved landfill.

## 2.8 Plant Auxiliaries: Fire Protection Systems

A fire protection system will be provided for prompt detection, alarm, and suppression of a fire. This system will ensure the safety of onsite personnel and the protection of onsite facilities. The proposed facility will be designed in accordance with all applicable National Fire Protection Association (NFPA) codes and standards. MID will work with the Ripon Consolidated Fire District to assure conformance with applicable local requirements.

The fire protection system for the MEGS plant will consist of connecting to the City fire service in South Stockton Avenue at two different locations for reliability. The existing City of Ripon fire water supply uses potable water. The connections to the fire water service

system will be in South Stockton Avenue, immediately adjacent to the project site. A fire loop with fire hydrants and sprinkler systems for critical plant equipment will be installed. The CTGs will be equipped with self-contained fire-detection and carbon dioxide fire protection systems. Portable fire extinguishers will also be installed at key locations throughout the plant and site. Fire protection alarms will be routed to a fire annunciation panel located in the plant control room. The fire alarm panel will provide visual and audible alarms of any detected fire anywhere throughout the plant. The panel will also indicate firewater flow to any sprinkler, spray, or deluge system, and it will monitor fire pump status.

## 2.9 Transmission Connection

The proposed subtransmission connection is to the MID 69-kV system at the Stockton Substation. The connection facilities will include expansion of the Stockton Substation and a new MID double-circuit 69-kV wood- or metal-pole subtransmission line between MEGS and the Stockton Substation, approximately 0.25 mile away. A fiber optic communications cable will also be placed on the same poles. Figure 2-5 is a one-line diagram of the proposed 69-kV system.

The plant will generate power at 13.8-kV and use two winding generator step-up (GSU) transformers to transform voltage to 69-kV for interconnection to the MID utility system. The new subtransmission line will be connected to the spare line position in the existing Stockton Substation. The existing 69-kV substation will be enlarged by two bays to accommodate the new facility.

The new proposed subtransmission line and fiber optic cable will be a 0.25-mile-long, 69-kV line in a new right-of-way that will be aligned as follows:

- Exit the site at the northeast corner and travel in an east by northeast direction to the substation approximately 0.25 miles entering the MID Stockton Substation from the south.
- The proposed alignment will require the installation of approximately 7 new wood or metal poles. The new poles are expected to be approximately 60 feet tall. The construction period is estimated at approximately one month.
- The route of the proposed 69-kV subtransmission line and fiber optic alignment is shown in Figure 2-1.

## 2.10 Station Electrical Distribution System

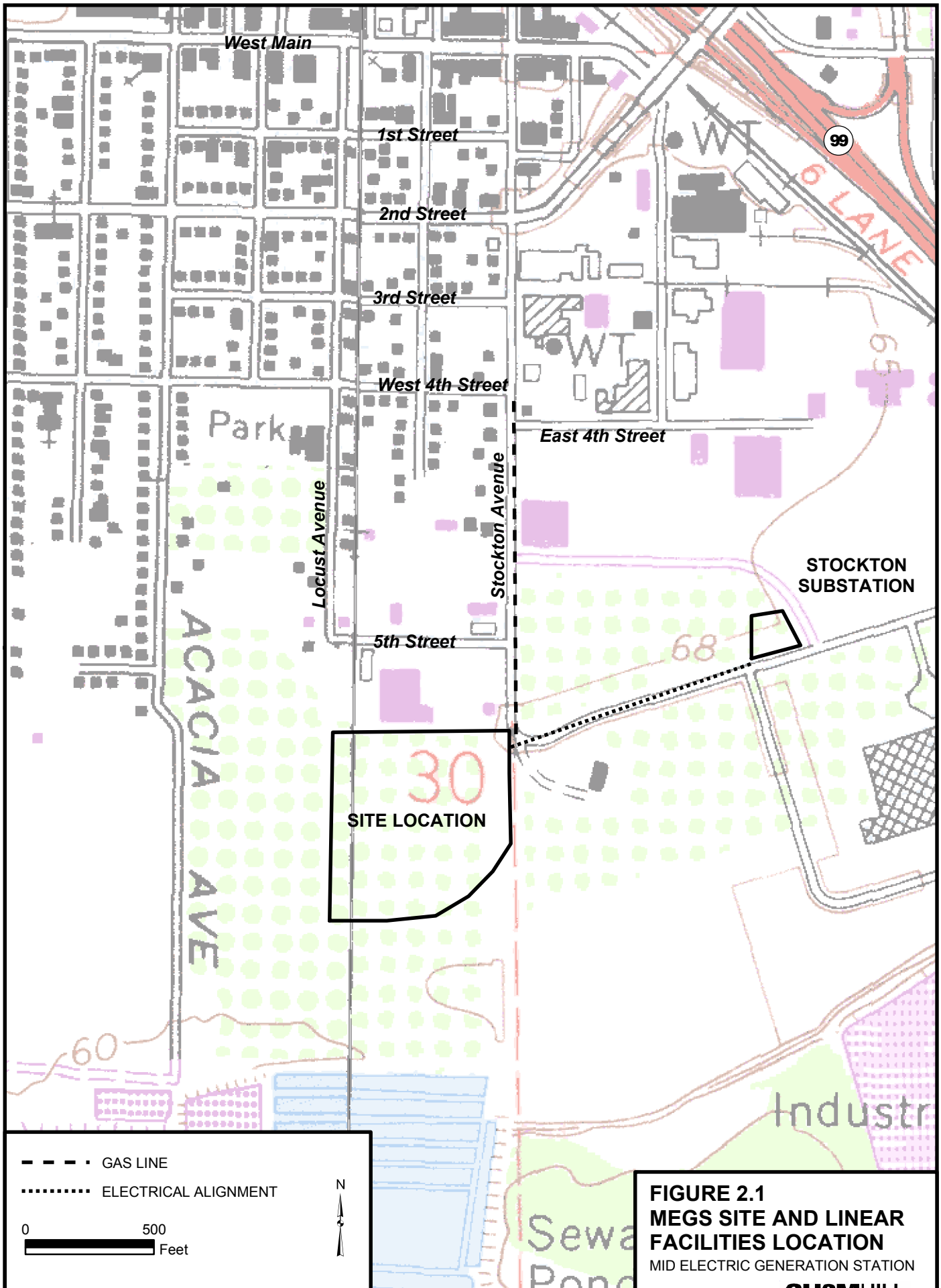
The station's electrical distribution system will consist of two 13.8 to 4.16 kV auxiliary transformers, a double-ended 4.16 kV switchgear with close-coupled medium voltage motor controllers, two 4.16 to 0.48 kV station service transformers, a double-ended 480 V switchgear, 480 V MCCs, a 125 Vdc distribution system, a 120 Vac UPS system, and other low voltage low power distribution. The auxiliary and station service transformers will be outdoor, oil-filled type. The 4.16 kV switchgear, 480 V switchgear, 480 V MCCs, 125 Vdc system, and 120 Vac UPS system will be located in the electrical and controls building.

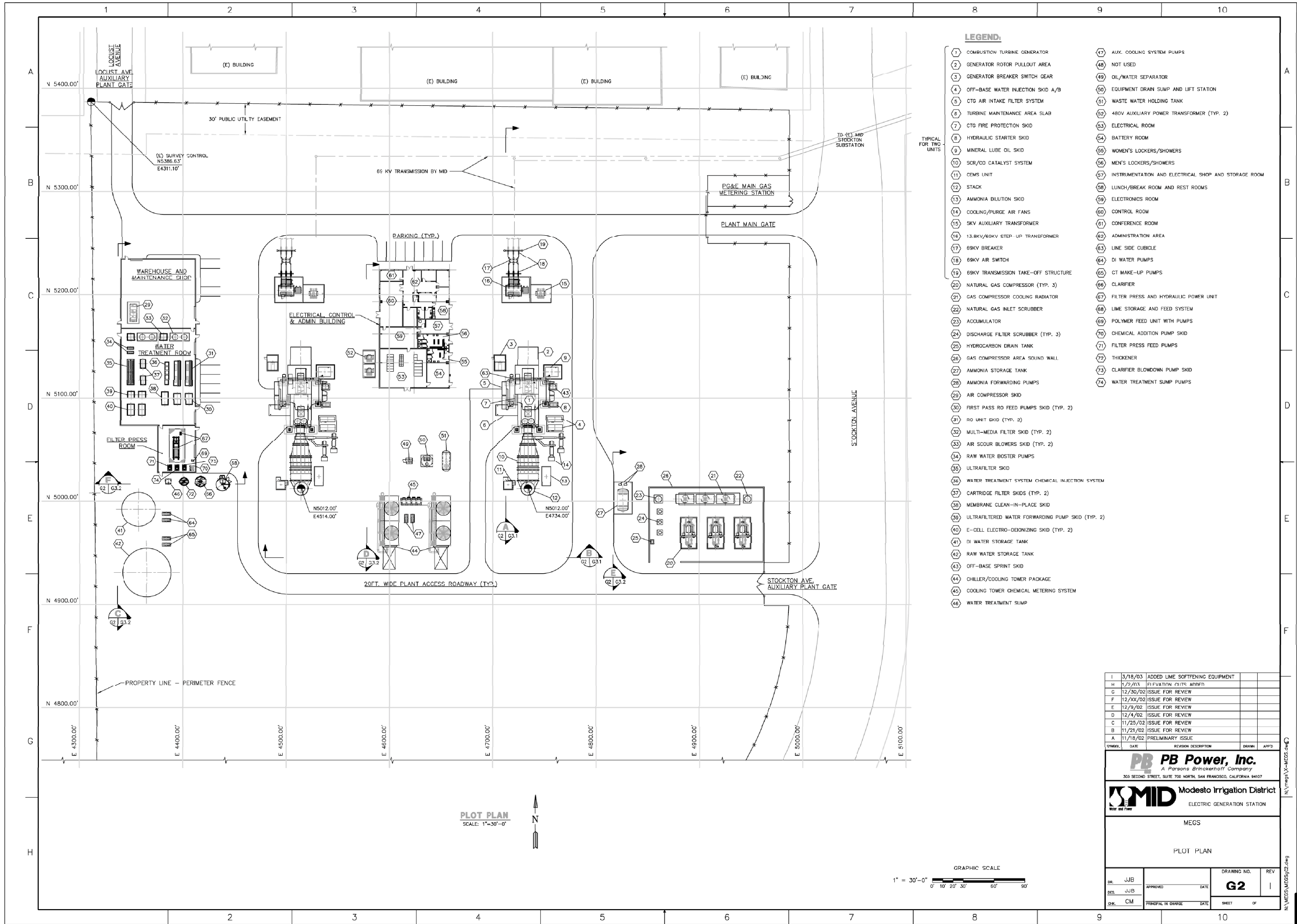
Most power within the station area will be distributed by insulated copper cable installed in underground conduit duct banks with cable trays and surface conduits used on (or near) equipment and within interior spaces. A comprehensive grounding and lightning protection system will be installed, and it will include a ground grid and equipment ground taps to all structures and major components. The station will be equipped with an internal telephone and paging system with access to the local telephone service, a closed-circuit television (CCTV) system and a public address system. Outdoor lighting will be provided for general areas, platforms, roadways, and parking areas.

## 2.11 Plant Controls

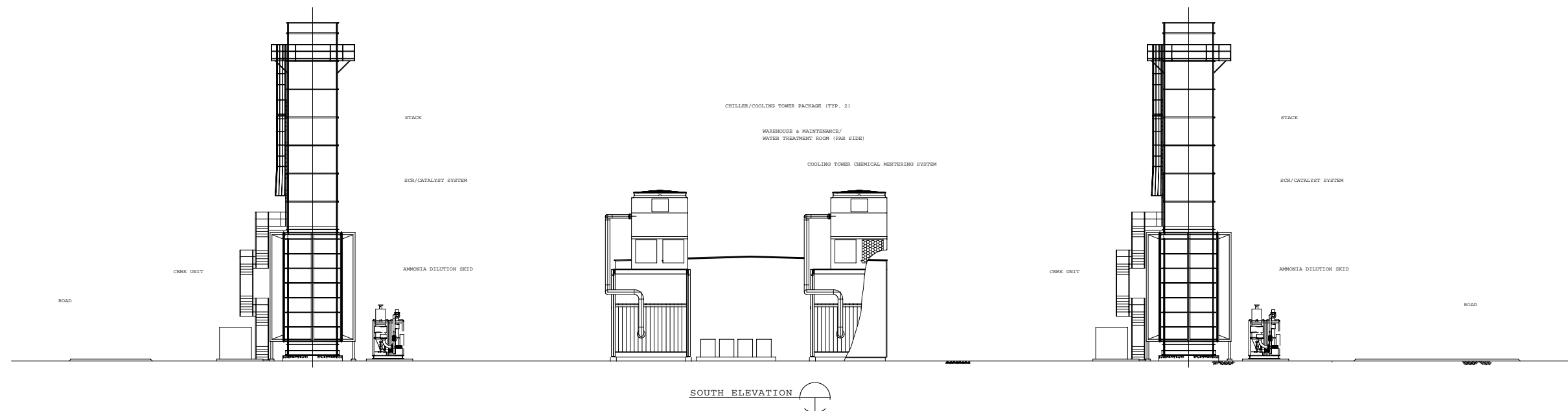
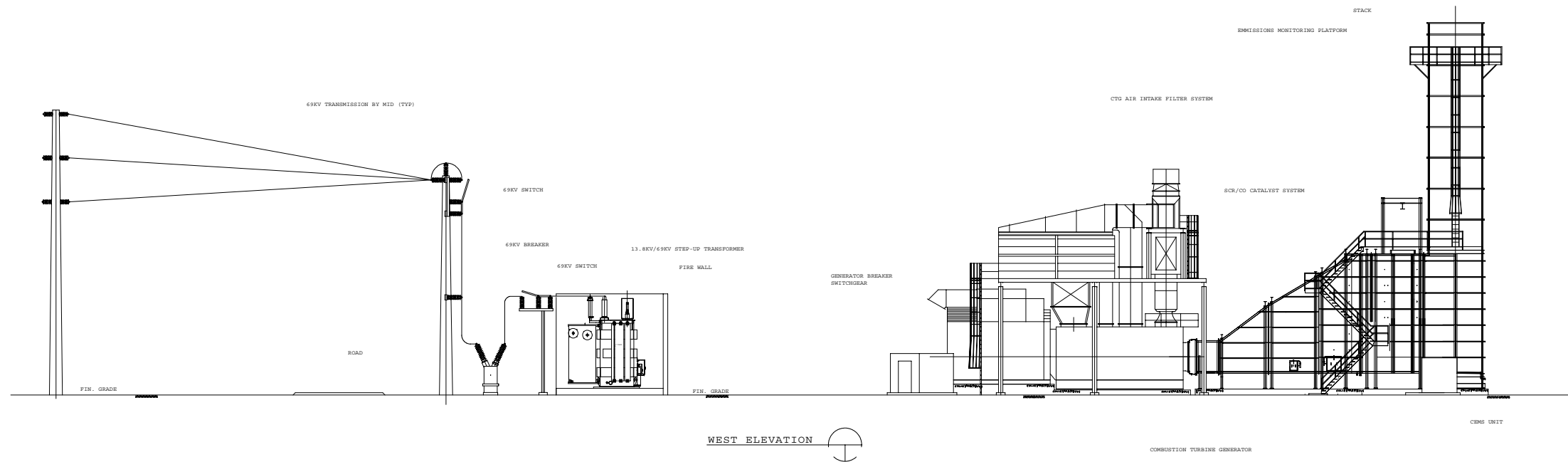
The plan instrumentation and control system will be designed to allow the operators to achieve safe and reliable operation of the power plant. Major equipment monitoring, control, and operation will be provided from the control room using plant control system (PCS) control consoles and the CTG Human Machine Interfaces (HMIs). The integration of the various plant systems will be accomplished by the PCS. The PCS will be used for supervisory control and monitoring of major plant components and package systems, such as the combustion turbine generator, and it will be used for direct control of SCR loops and other balance-of-plant equipment and processes.

A full-function operator workstation will be located at the MID Woodland Generation Station (WGS) which is manned 24-7. From this HMI, monitoring of the CTGs and full control and monitoring of the balance-of-plant equipment will be possible. WGS is approximately 8.5 miles from MEGS. Limited control (start and shutdown) capability and system monitoring (plant MW, EVAR output, etc.) will be possible through a remote terminal unit interface with the MID central dispatch.



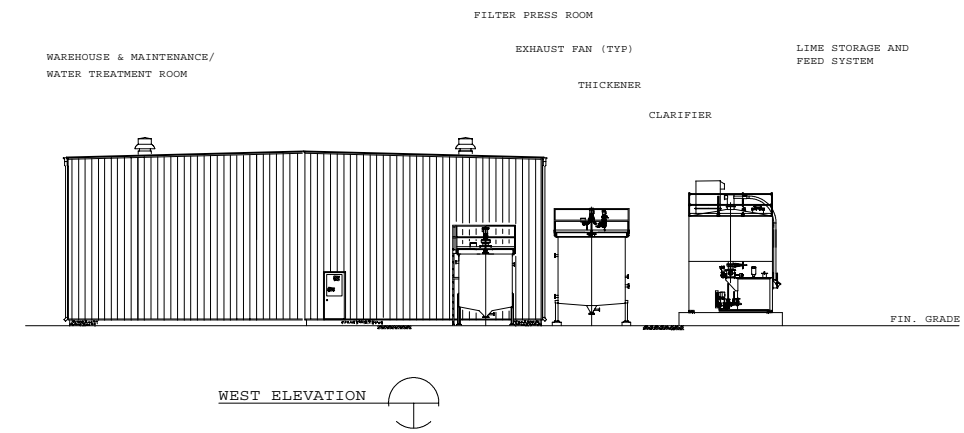
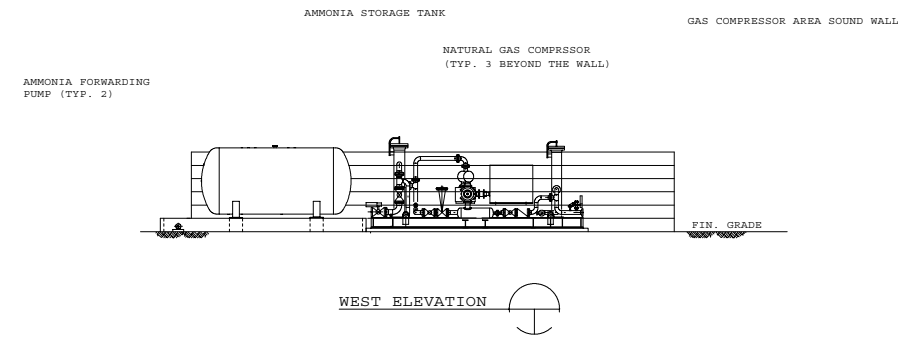
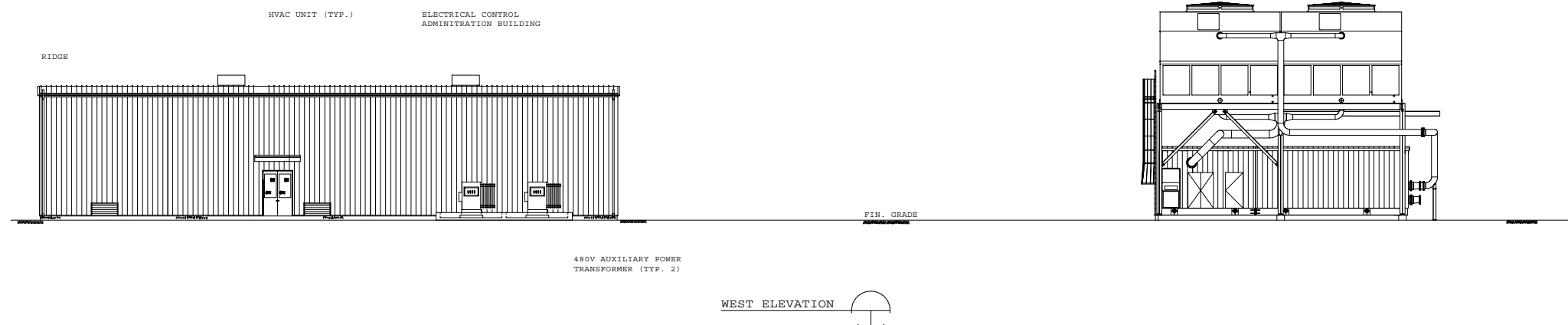
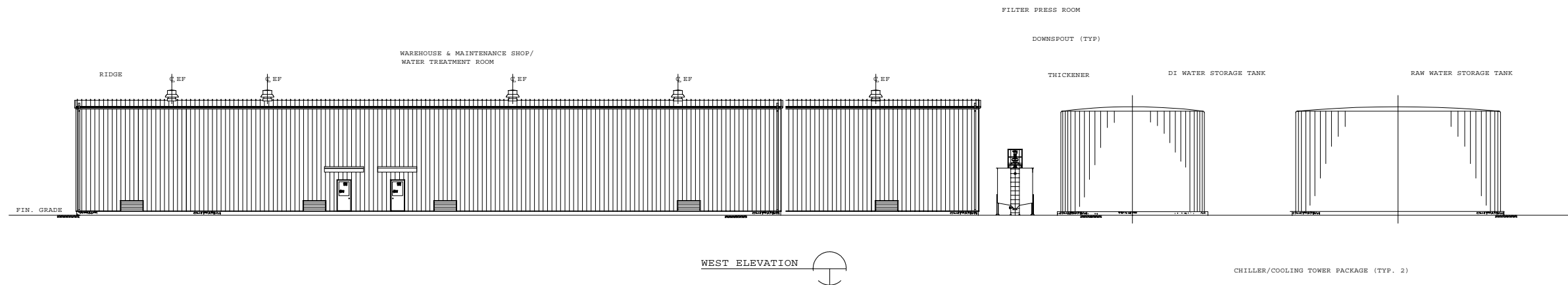


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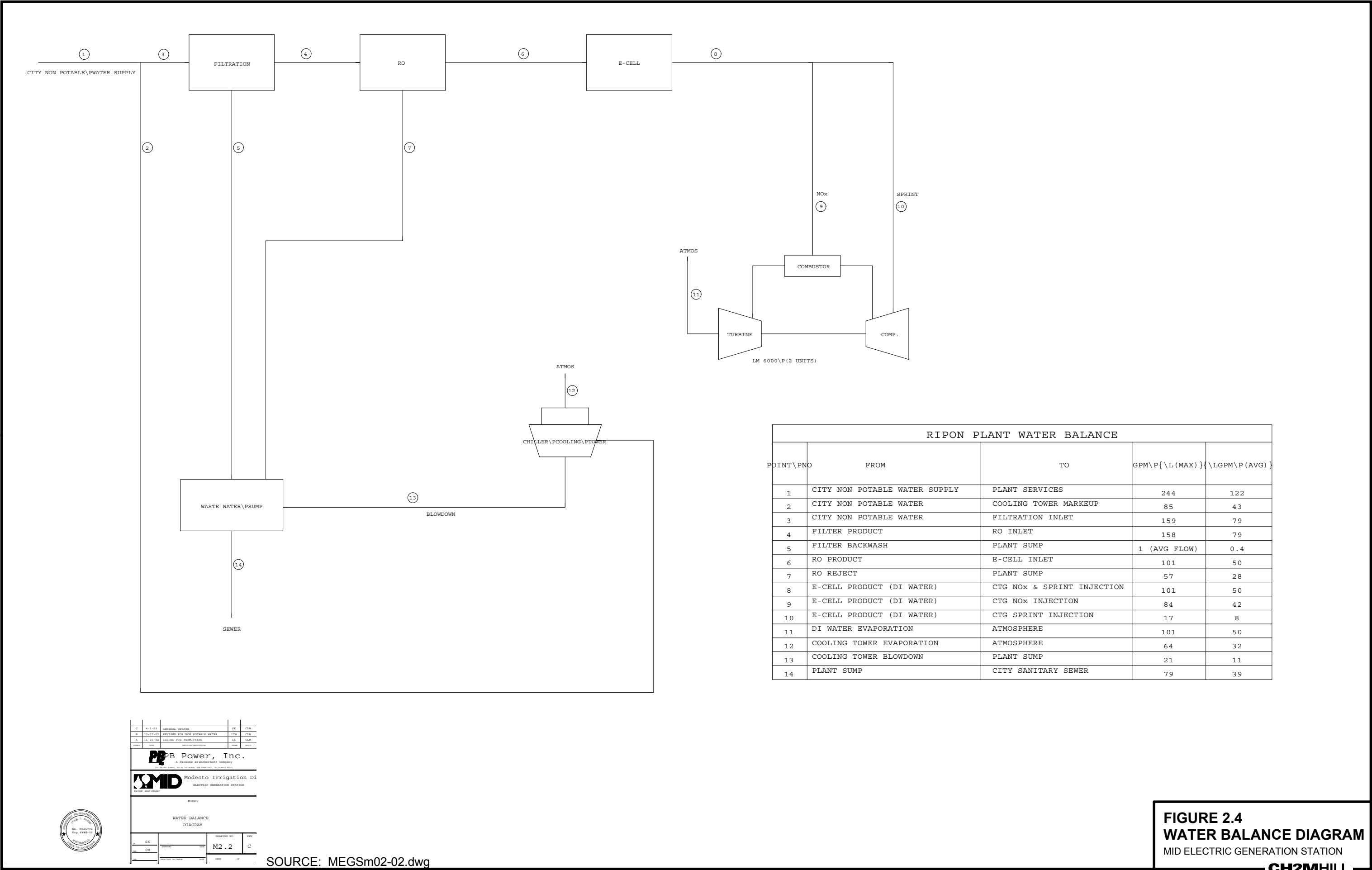
**FIGURE 2.3a**  
**PLANT ELEVATIONS**  
 MID ELECTRIC GENERATION STATION  
**CH2MHILL**

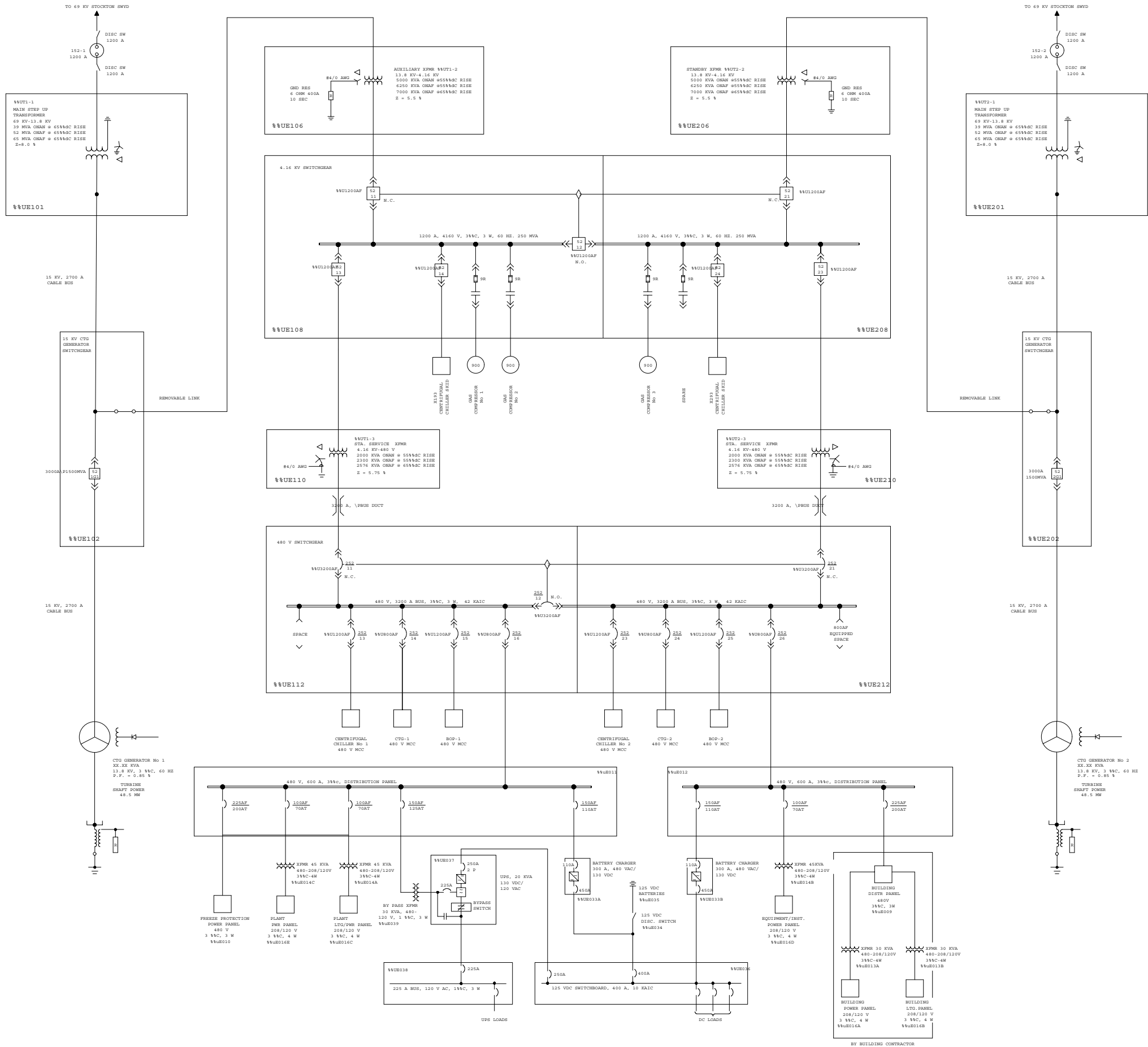
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**FIGURE 2.3b**  
**PLANT ELEVATIONS**  
 MID ELECTRIC GENERATION STATION  
**CH2MHILL**

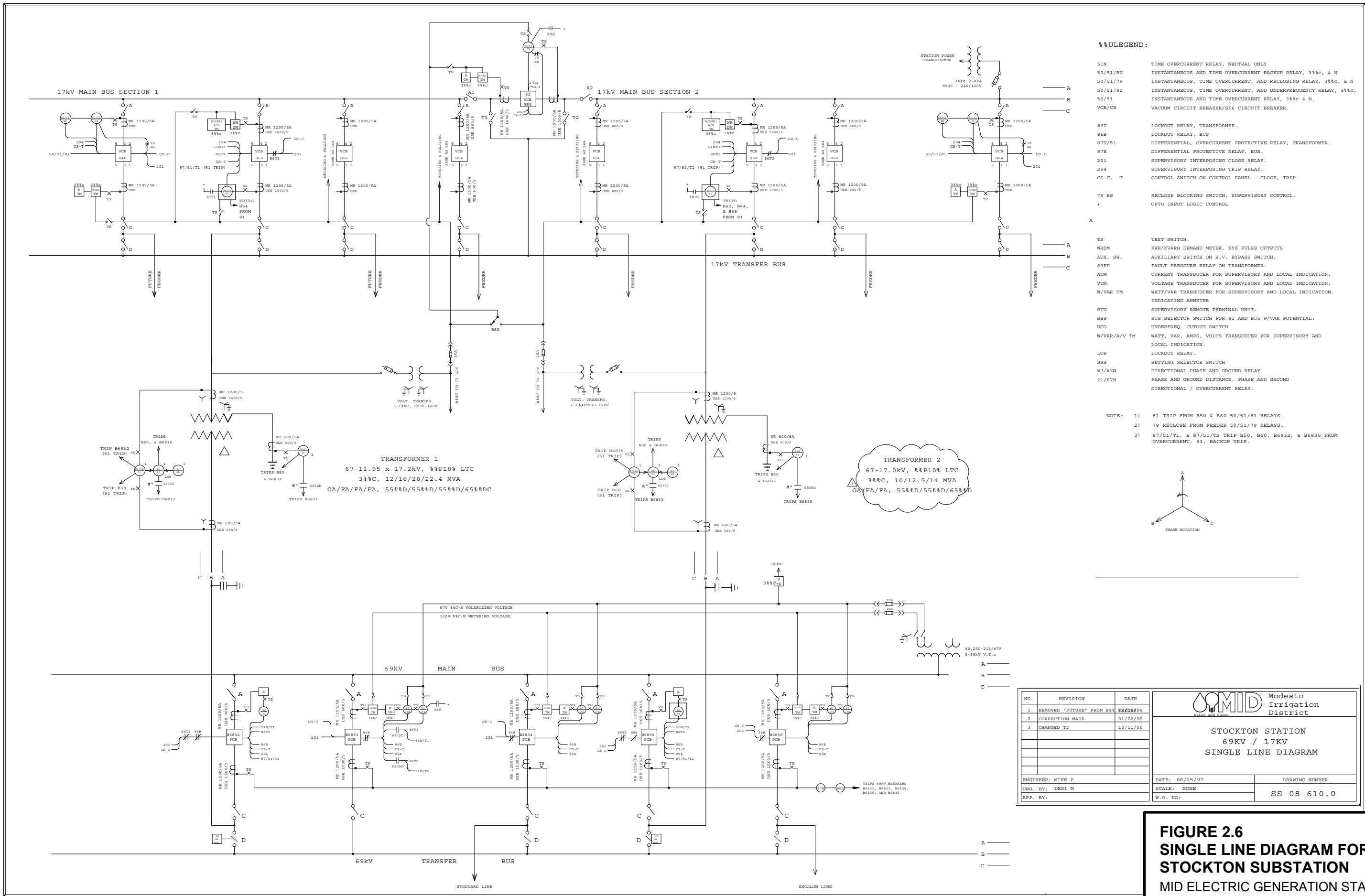
SOURCE: MEGSG03-02.DWG 3/18/2003





A	12-10-02	ISSUED FOR REVIEW	JP	JE
SYMBOL	DATE	REVISION DESCRIPTION	DRAWN	APP'D
<div><div><div>Power, Inc.</div><div>A Parsons Brinckerhoff Company</div><div>303 SECOND STREET, SUITE 700 NORTH, SAN FRANCISCO, CALIFORNIA 94107</div></div><div><div><div></div><div>Modesto Irrigation</div><div>Water and Power</div></div><div>ELECTRIC GENERATION STATION</div></div></div>				
MEGS				
COMPOSITE SINGLE-LINE				
DR.	JP	APPROVED _____ DATE _____	DRAWING NO.	REV
DES.	JE		E2.1	A
CHK.	JRL		SHEET	OF

FIGURE 2.5  
SINGLE LINE DIAGRAM  
MID ELECTRIC GENERATION STATION



**FIGURE 2.6**  
**SINGLE LINE DIAGRAM FOR**  
**STOCKTON SUBSTATION**  
**MID ELECTRIC GENERATION STATION**